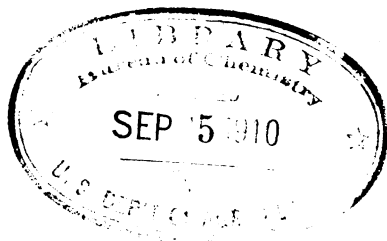


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U. S. DEPARTMENT OF AGRICULTURE,

BUREAU OF ANIMAL INDUSTRY.—CIRCULAR 162.

A. D. MELVIN, CHIEF OF BUREAU.

OFFICIALS, ORGANIZATIONS, AND EDUCATIONAL INSTITUTIONS CON- NECTED WITH THE DAIRY INTERESTS (1910).

The accompanying lists, compiled under the direction of B. H. Rawl, Chief of the Dairy Division, contain the names and addresses of the principal officials connected with the dairy industry, and show the facilities offered in the several States for technical dairy instruction.

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UNITED STATES DEPARTMENT OF AGRICULTURE.

JAMES WILSON, *Secretary.*

W. M. HAYS, *Assistant Secretary.*

BUREAU OF ANIMAL INDUSTRY.

A. D. MELVIN, *Chief.*

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DAIRY DIVISION.

B. H. RAWL, *Chief.*

HELMER RABILD, *in charge of Dairy Farming Investigations.*

B. D. WHITE, *in charge of Dairy Manufacturing Investigations.*

L. A. ROGERS, *in charge of Research Laboratories.*

GEORGE M. WHITAKER, *in charge of Market Milk Investigations.*

ROBERT MCADAM, *in charge of Renovated Butter Inspection.*

WORK OF THE DAIRY DIVISION.

The Dairy Division of the Bureau of Animal Industry, United States Department of Agriculture, is engaged in various lines of educational and research work. Information is collected and distributed concerning all branches of dairying, including the care and improvement of dairy cattle, and the production, care, and distribution of dairy products. Statistics are compiled relative to dairy organizations, dairy schools, facilities for technical instruction, state and municipal laws, development of markets, milk supply of cities, and organization of creameries and cheese factories.

The division is divided into five sections. About ninety persons are employed.

DAIRY FARMING.

This work includes problems in the housing and feeding of dairy cattle, remodeling old barns and building new ones, construction of silos, selection and breeding of dairy herds, keeping records of the performance of individual cows, organization of cow-testing associations, and attendance at farmers' institutes and other agricultural meetings.

A special effort has been made to develop dairying in the South by cooperating with the agricultural colleges, experiment stations, and state departments of agriculture, in giving assistance to individual dairymen, conducting dairy short courses, etc.

The cow-testing associations are self-supporting associations of dairymen who organize for the purpose of determining by monthly tests the productiveness of the individual cows in their herds, with a view to improving the average production of the herd.

RESEARCH LABORATORIES.

These laboratories are concerned with the bacteriology and chemistry involved in the manufacture, handling, and distribution of all dairy products.

A study is made of the bacteria which occur in cream, and of the other factors which have an influence on the chemical changes occurring in butter during its manufacture and storage, and the relation of these changes to alterations in flavor. For the purpose of carrying on this work more efficiently, bacteriological and chemical laboratories have been equipped on the grounds of the creamery at Albert Lea, Minn. Cold-storage rooms for the work are maintained in Chicago.

Cheese investigations consist of three general lines: Soft cheese at Storrs, Conn.; Cheddar cheese at Madison, Wis.; and Swiss cheese at Albert Lea, Minn., all in cooperation with the experiment stations of the States named. A study is made of methods of manufacture, machinery, curing, storage, and markets.

Investigations are under way on the nature of the bacteria, and the changes brought about by them, in milk produced and handled under different conditions.

The division is cooperating with the Missouri Experiment Station in investigating the variation in normal milk as affected by feed. This necessitates determining the variation due to peculiarities of breed, to gestation, period of lactation, loss or gain in body weight, etc. Special study is made of the composition of butterfats, the comparative size of fat globules from milk of different breeds, the coloring matter of milk, and the proportions of caseins and albuminoids.

DAIRY MANUFACTURES.

The work of this section is almost entirely educational, the object being to put into actual practice the knowledge obtained from scientific research. By means of correspondence and by sending men into the field, assistance is given to creameries in improving methods of manufacture, preventing losses, and keeping accurate records, all of which contribute materially toward putting them on a more profitable basis.

The Dairy Division maintains offices in New York, Chicago, and San Francisco, with a butter expert in each place whose special duty it is to inspect the butter received at these markets and give helpful suggestions to the creameries where the butter is made. Inspectors also examine butter collected by state authorities for educational purposes, and investigate the general system of scoring butter in the markets.

MARKET MILK.

This section is devoted largely to educational work for better methods in the production and handling of market milk and cream. The work is carried on by means of correspondence, lectures, demonstration-inspections, exhibitions, milk contests, and personal visits. The work is mostly performed in cooperation with local health and dairy officials. Direct assistance has been given to the health departments of 245 cities and towns. Upon request, meetings are held with milk producers, physicians, boards of health, and milk consumers generally, for the purpose of discussing problems relating to the improvement of the milk supply and milk ordinances.

The score-card system of dairy-farm inspection has been introduced in 131 cities, and as a result the inspection has been rendered much more efficient.

An important feature of educational work carried on by this section is conducting milk and cream shows, or contests, in which samples of milk and cream are entered by various producers for examination and scoring.

RENOVATED BUTTER INSPECTION.

Under the act of Congress of May 9, 1902, the Dairy Division is responsible for the inspection of renovated butter and of the factories producing the same. It is also charged with inspections of butter for export at Chicago, New York, and Boston.

The sanitary condition of renovated butter factories is rated on the basis of a score card prepared by the division, and the factories are required to maintain the standard established. The quality of the packing stock (or butter to be renovated) is also carefully examined and passed upon by the inspectors. Three men are regularly engaged in this work, and are assisted by 18 meat inspectors in cities where both meat and renovated butter inspection are carried on.

STATE DAIRY OFFICIALS.

CALIFORNIA. Secretary of state dairy bureau, F. W. Andreasen, 16 California street, San Francisco; appointed by the state dairy bureau. Chemist, Chester F. Hoyt, San Francisco; appointed by state dairy bureau. Six inspectors appointed by state dairy bureau for dairies, factories, and markets. Appropriation, \$12,500. Police work: Enforcement of the state dairy laws. The state dairy bureau consists of three members, appointed by the governor, who serve without compensation.

COLORADO. State dairy commissioner, Robert L. Cochrane, Morrison; appointed by the governor. Deputy commissioner, Dr. W. W. Yard, Denver. Inspections are made by the commissioner or deputy commissioner. Appropriation, \$2,700.

CONNECTICUT. Dairy commissioner, Hubert F. Potter; appointed by the governor. Deputy commissioner, appointed by the commissioner, Tyler Cruttenden. Three special inspectors appointed by the commissioner look after sanitary conditions of dairies and places where dairy animals are kept. Appropriation by the general assembly for salaries and expenses, \$8,300, with an addition of \$2,500 per year for the analytical work done at the Agricultural Experiment Station, New Haven.

IDAHO. State dairy, food, and sanitary inspector, James H. Wallis, Boise; appointed by the state board of health; salary, \$1,500. State chemist, Claude D. Mason; salary, \$2,000.

ILLINOIS. State food commissioner, Alfred H. Jones, Robinson; appointed by the governor. Assistant commissioner, John B. Newman, Elgin. Sixteen inspectors and six chemists appointed by the commissioner. Office, 1620 Manhattan Building, Chicago.

INDIANA. State food and drug commissioner, H. E. Barnard, Indianapolis; appointed by the state board of health. Four inspectors appointed by state board of health. Appropriation, \$30,000. Police work: Enforcement of the pure food law. Food chemist, H. E. Bishop; assistant food chemists, W. D. McAbee and Cullen Thomas.

IOWA. State food and dairy commissioner, W. B. Barney, Hampton; appointed by the governor. Deputy commissioner, B. C. Iliff, Des Moines; appointed by the commissioner. Assistant dairy commissioners, T. A. Clarke, West Bend; J. J. Ross, Iowa Falls. State dairy expert, H. G. Van Pelt. Six food inspectors and fourteen milk inspectors. Appropriation for dairy inspection, \$5,000; for food inspection and laboratory work, \$15,000; other work, \$2,000. Educational work: Institutes, scoring contests, dairymen's meetings, factory instruction. Police work: Enforcement of dairy, food, concentrated commercial feeding stuffs, etc., laws.

KANSAS. State dairy commissioner, D. M. Wilson; appointed by the board of regents of the Kansas State Agricultural College. Deputy state dairy commissioner, M. R. Alleman. Inspection of creameries, cheese factories, dairy barns, and utensils provided for. Appropriation, \$6,000. Educational work: Institutes, scoring contests, dairymen's meetings, factory instruction. Police work: Enforcement of the dairy laws.

KENTUCKY. The state food and drugs act is enforced by the experiment station, and is particularly enforced with regard to milk and dairy products. Chief of food and drug division, R. M. Allen, Lexington.

MAINE. Commissioner of agriculture, A. W. Gilman, Foxcroft. Charged by law to investigate the production, manufacture, transportation, storage, and sale of dairy products, substitutes, and imitations thereof; to enforce all dairy laws and to promote dairy interests; also to employ a dairy expert and such assistants and agents as may be necessary, who shall have control of the field work and be especially responsible for it. The work is principally educational, and consists of institutes, meetings with granges, organizing cow-testing and breeders' associations, and investigation of dairy products. State dairy instructor, Leon S. Merrill, Solon; assistant dairy instructor, R. W. Redman, Corinna, in charge of investigation of dairy products; assistant dairy instructor, C. W. Barber, Yarmouth; assistant dairy instructor, in charge field work, seed improvement division, A. S. Cook, Presque Isle.

MASSACHUSETTS. Executive officer of the dairy bureau is the secretary of the state board of agriculture. General agent state dairy bureau, P. M. Harwood, 136 State House, Boston, elected by state board of agriculture. Chemists, Dr. B. F.

- Davenport, 161 Tremont street, Boston; Dr. H. C. Emerson, 177 State street, Springfield. Five inspectors, appointed by the state dairy bureau through its general agent. Inspections twice a year. Appropriation, \$8,000. Educational work: Institutes, scoring contests, dairymen's meetings, lectures and demonstrations before farmers' organizations. Police work: Enforcement of the dairy laws.
- MICHIGAN.** State dairy and food commissioner, Colon C. Lillie, Lansing; appointed by the governor. Deputy commissioner, N. P. Hull, Dimondale. Eight regular dairy and food inspectors, appointed by the commissioner. Inspections at intervals throughout the year. Appropriation, \$35,000; \$6,000 of yearly appropriation being set aside for special inspectors. Fees, about \$7,000 additional. Educational work: Institutes, scoring contests, dairymen's meetings, factory instruction. Police work: Enforcement of dairy and food laws.
- MINNESOTA.** State dairy and food commissioner, Andrew French, St. Paul; appointed by the governor. Assistant commissioner, John McCabe, St. Peter. Inspectors appointed by the commissioner; nine for butter, one for cheese, two for milk, two for herd and barn, one for canning factory, and four other food inspectors. Appropriation, \$50,000. Educational work: Scoring contests, dairymen's meetings, factory instruction, and instruction one month in the dairy course at the agricultural college. Police work: Enforcing the pure-food laws.
- MISSOURI.** A state and food and drug commission was created by act of the legislature May 15, 1909. The office of state dairy commissioner was created the same date. Food and drug commissioner (also acting dairy commissioner), Dr. W. P. Cutler; appointed by the governor. Deputy food and drug commissioner and analyst, J. O. Halverson, Columbia. Chemist, Dr. P. F. Trowbridge, Columbia. Six inspectors are appointed by the food and drug commissioner.
- NEBRASKA.** Food, drug, and dairy commissioner, Governor Ashton C. Shallenberger, Lincoln. Deputy commissioner in charge, S. L. Mains, Lincoln; appointed by the governor. State chemist, E. L. Redfern, Lincoln. Four dairy inspectors, two food and drug inspectors. Biennial appropriation, \$15,800. Office and laboratory appropriation for the biennium, \$1,500.
- NEW JERSEY.** Chief of the division of creameries and dairies, George W. McGuire, Trenton; appointed by the state board of health. Assistant inspectors, A. I. Goehrig, Trenton; S. S. Van Druff, Sussex; William J. Willsey, New Brunswick.
- NEW YORK.** Commissioner of agriculture (including dairy), Raymond A. Pearson, Albany; appointed by the governor. All other employees of the state department of agriculture are appointed by the commissioner through examination under civil service. First assistant commissioner, George L. Flanders, Albany. Assistant commissioners, Henry H. Kracke, 23 Park Row, New York; S. Brown Richardson, Lowville; E. J. Preston, Amenia; C. E. Sackett, 44 Arcade Building, Utica; C. T. Russell, Munnsville; Verlett C. Beebe, Arcade; and 134 employees.
- NORTH DAKOTA.** State dairy commissioner, R. F. Flint, Bismarck; assistant dairy commissioner, E. H. Pierce, Bismarck; both appointed by the commissioner of agriculture and labor. Pure food commissioner, appointed by the governor. Inspections are made once a year. Appropriation for dairy inspection, \$2,500 and fees collected from licenses; appropriation for food inspection, including laboratory work, \$10,000 and fees. Educational work: Institutes, dairymen's meetings, factory instruction, and herd testing. Police work: Enforcing sanitary conditions.
- OHIO.** State dairy and food commissioner, Renick W. Dunlap, Columbus; elected at state election. Chief inspector, Charles H. May, Columbus. Two assistant commissioners, nine dairy and food and drug inspectors, five consulting chemists. Appropriation, \$49,570, for dairy, food, and drugs.

OKLAHOMA. The state board of agriculture is the state dairy commission according to the new law, with the provisions of the old law in force. President, J. P. Conners, state board of agriculture, Guthrie. Secretary, C. F. Barrett. Treasurer, R. F. Wilson. State dairy inspector, O. W. Holmes. Appropriation, \$5,000. Police work: Cooperation with the city authorities and the state health department in the enforcement of pure-food laws. Dairy work is partly educational. Analytical work is done at the experiment station laboratory.

OREGON. State dairy and food commissioner, J. W. Bailey, room 19, Breeden Building, Portland; elected by the people. Deputy commissioner, R. V. Williamson. Three dairy inspectors, at salaries of \$1,200 each, with an expense allowance of \$800. Appropriation, exclusive of the above, \$4,800. Educational work: Institutes.

PENNSYLVANIA. State dairy and food commissioner, James Foust, Harrisburg; appointed by the governor. Field force: Nineteen special agents. Experts: Nine chemists. Legal force: Six attorneys. Appropriation, \$180,000 for two years, which is more than covered by fees, fines, and costs collected. Police work: Enforcement of the dairy and pure-food laws.

TEXAS. Dairy and food commissioner, J. S. Abbott, Denton; appointed by the governor. Term expires July 3, 1912. Secretary, Miss Kate Casparis. Inspector R. H. Hoffman, jr.

UTAH. State dairy and food commissioner, Willard Hanson, Salt Lake City; appointed by the governor. Deputy commissioner, Heber C. Smith, Salt Lake City. Chemist, Harmer Harms. Two inspectors of dairy products and other foods. Appropriation, \$11,000 for two years. Police work: Enforcement of the pure-food law.

VIRGINIA. State dairy and food commissioner, William D. Saunders, Richmond; appointed by the governor. Deputy dairy and food commissioner, Benjamin L. Purcell, Richmond. Five inspectors of dairy products and other foods. Chemical work done in the chemical laboratory of the department of agriculture and immigration of Virginia. Appropriation, \$7,500, also income from tag sales and licenses for powder manufacturers and dairy products. Educational work: Institutes, dairymen's meetings, factory instruction. Police work: Enforcing the pure-food law.

WASHINGTON. State dairy and food commissioner, L. Davies, Davenport; appointed by the governor. Deputy dairy instructor, L. W. Hanson, Seattle. Deputy dairy and food commissioner, Will H. Adams, Spokane. Deputy dairy inspectors, George S. Henderson, Pullman; F. H. Bothell, Spokane; Chemists, Elton Fulmer, Pullman; Charles W. Johnson, Seattle. All deputies are appointed by the commissioner. Appropriation for two years, \$37,120. Educational work: Institutes, dairymen's meetings, factory instruction, instruction on farm in feeding, breeding, production, and care of butter, milk, and cream; creamery inspection and instruction. Police work: Sanitary inspection.

WISCONSIN. State dairy and food commissioner, J. Q. Emery, Madison; appointed by the governor. Assistant commissioner, U. S. Baer, Madison. Second Assistant commissioner, H. C. Larson, Madison. One chemist, four assistant chemists, and eleven inspectors, appointed by the commissioner with the approval of the governor, subject to civil-service law. Two inspectors of other foods. Appropriation approximating \$50,000. Educational work: Institutes, dairy school aid, dairymen's meetings, and factory instruction. Police work: Enforcement of dairy, food, and drug laws.

DAIRY ASSOCIATIONS.

NATIONAL AND INTERNATIONAL.

National Dairy Union. Organized 1891. Membership, 25,000. Incorporated. Does not receive state aid. Object: Originally, to secure the passage of the present oleo law; since that time to assist in enforcing and defending the same and preventing its repeal. President, George L. Flanders. Vice-president, J. A. Walker. Acting secretary, S. B. Shilling. Treasurer, W. D. Hoard. Directors: W. D. Hoard, Fort Atkinson, Wis.; George L. Flanders, assistant commissioner of Agriculture of New York, Albany, N. Y.; S. B. Shilling, 154 Lake street, Chicago, Ill.; J. A. Walker, 700 South Clinton street, Chicago; James Foust, state dairy and food commissioner of Pennsylvania, Harrisburg, Pa.

National Creamery Buttermakers' Association. Organized 1891. Membership, 1,500. Not incorporated. President, J. J. Farrell, Carver, Minn. Vice-president, Lauritz Olsen, West De Pere, Wis. Secretary-treasurer, S. B. Shilling, 154 Lake street, Chicago, Ill. Executive committee: The above officers and F. W. Stephenson, Lamont, Iowa; R. F. Frary, Lapeer, Mich., with a vice-president from each State. Annual meeting, in connection with the National Dairy Show.

Association of State and National Food and Dairy Departments. Organized 1896. Membership, state and federal dairy and food-control officials who have paid annual dues. President, George L. Flanders, Albany, N. Y. First vice-president, Dr. Lucius P. Brown, Nashville, Tenn. Second vice-president, Dr. D. Harvy Dillon, New Orleans, La. Third vice-president, Andrew French, St. Paul, Minn. Secretary, Dr. W. M. Allen, Raleigh, N. C. Treasurer, James Foust, Harrisburg, Pa. Members of the executive committee, Dr. C. D. Woods, Orono, Me.; Dr. S. J. Crumbine, Topeka, Kans.; Dr. A. N. Cook, Vermilion, S. Dak., and the president and secretary. Annual meeting, New Orleans, La., November, 1910.

National Dairy Show Association. Organized 1905. Incorporated. Object: Exhibition of modern dairy machinery and appliances, dairy products, and dairy cattle, working dairies, and sanitary milk plants. Educational features: Competition in judging contests, meetings of butter and cheese makers, and a national convention of dairymen. Cooperating organizations: The Dairy Division of the United States Department of Agriculture, the agricultural colleges and experiment stations and associations of breeders of dairy cattle. Directors: The president, J. D. Nichols, Cleveland, Ohio; the vice-president, W. B. Barney, Hampton, Iowa; the secretary-manager, Prof. H. E. Van Norman, State College, Pa.; the treasurer, D. H. Jenkins, Indianapolis, Ind., together with J. A. Walker, Chicago, Ill., E. Sudendorf, Clinton, Ill., and E. K. Slater, St. Anthony Park, St. Paul, Minn. Fifth annual meeting, Chicago, Ill., October 20-29, 1910.

Official Dairy Instructor's Association. Organized 1906. Membership, the dairy instructors and investigators (of college rank) in the agricultural colleges and experiment stations, the Dairy Division of the United States Department of Agriculture and the Dominion Department of Agriculture, Canada. Object: To advance the interests of dairy instruction and investigation. President, C. H. Eckles, Columbia, Mo. Vice-president, H. E. Van Norman, State College, Pa. Secretary-treasurer, C. B. Lane, Philadelphia, Pa. Annual meeting, in connection with the National Dairy Show.

National and State Dairy Inspectors' and Instructors' Association. Organized 1907. Membership, 27. Object: To build up and improve the dairy and creamery interests of the United States as a whole, and the States severally. President, H. C. Larson, Madison, Wis. Vice-president, Helmer Rabild, Wash-

ington, D. C. Secretary-treasurer, B. D. White, Washington, D. C. Annual meeting in connection with the National Dairy Show.

Certified Milk Producers' Association of America. Organized 1908. Membership, 30. President, Stephen Francisco, Montclair, N. J. First vice-president, S. M. Shoemaker, Eccleston, Md. Second vice-president, George Wood, Wawa, Pa. Third vice-president, E. T. Gill, Haddonfield, N. J. Fourth vice-president, S. L. Stewart, Newburgh, N. Y. Secretary-treasurer, Raymond A. Pearson, Albany, N. Y.

American Association of Creamery Butter Manufacturers. Organized 1908. Membership, 55. Headquarters, Chicago, Ill. Object: To promote dairy production, butter manufacturing, butter consumption, and dairy legislation. President, J. A. Walker, Chicago. Vice-president, A. S. Hanford, Sioux City, Iowa. Secretary, George L. McKay, 644 Commercial National Bank Building, Chicago, Ill. Treasurer, W. T. S. White, Chicago, Ill. Assistant secretary, F. W. Bouska, Chicago, Ill. Annual meetings, the third Tuesday in February.

American Dairy Farmers' Association. Organized 1909. Object: To improve the dairy interests of America. President, N. P. Hull, Dimondale, Mich. Vice-president, V. P. Bailey, Tacoma, Wash. Secretary-treasurer, Helmer Rabild, Washington, D. C. Directors: J. L. Hills, Burlington, Vt.; W. J. Fraser, Urbana, Ill.; A. J. Glover, Fort Atkinson, Wis.; W. F. Schilling, Northfield, Minn.; Leon S. Merrill, Solon, Me.

National Association of Ice Cream Manufacturers. Organized 1901. President, Ross A. Woodhull, 250 Ninety-second street, Chicago, Ill. Vice-president, A. A. Chapin, Washington, D. C. Secretary, L. W. McCray, Cincinnati, Ohio. Treasurer, Arthur Hoadley, Memphis, Tenn. Annual meeting in connection with the National Dairy Show.

United Dairy Interests Association. Organized 1909. Object: To advance the general dairy interests of the country; to promote and emphasize the common interests of all breeds of dairy cattle; to advocate effective movements—legislative, educational, or otherwise—looking to the improvement of the entire industry. President, Robert Scoville. Vice-president, William T. Wells. Secretary-treasurer, Valancey E. Fuller, 150 Nassau street, New York, N. Y. Executive council is composed of one representative of each of the associations of breeders of purebred dairy animals.

American Association of Medical Milk Commissions. See page 28.

International Dairy Federation. Organized 1903. Object: Cooperation in dairy matters and discussion of leading questions of dairy interest in different countries, having especially in view the suppression of fraudulent dealing in the sale of butter and oleomargarin, fostering sanitary milk and dairy products generally, and maintaining the international association. President, Baron Peers, Nieuwborg, Belgium. Secretary-general, L. Gedoelst, Brussels, Belgium. Headquarters of the federation, 23 Rue David Desvachez 23 Brussels. The fifth international dairy congress is to be held in Stockholm, Sweden, 1911.

International Milk Dealers' Association. Organized 1907. Membership, 30. Object: The improvement of city milk supplies. President, J. D. Nichols, Cleveland, Ohio. Vice-president, Loton Horton, Slawson-Decker Company, New York City. Secretary-treasurer, B. D. White, Washington, D. C.

STATE.

ALABAMA. *Alabama State Dairy Association.* Organized 1909. Membership about 40. Not incorporated. Does not receive state aid. Object: To promote the dairy industry in the State by having one main meeting in the winter, and a

summer meeting in connection with institute work, either at Auburn or other places. President, W. E. Matthews, Birmingham. Secretary-treasurer, William Hardie, jr., Alexandria. Eight vice-presidents for the different sections of the State, as follows: C. H. Cowart, Troy; J. R. Hall, Dothan; F. H. Bates, Hamburg; M. J. Barrett, Thorsby; Charles Prichett, Attalla; Charles Cleveland, Huntsville; W. L. Lee, Birmingham.

CALIFORNIA. *California Creamery Operators' Association.* Organized 1900. Membership, 250. Not incorporated. Does not receive state aid. Aided by volunteer subscriptions and by firms interested in and identified with the industry. President, C. C. Ridgway, Porterville. Vice-president, F. H. Daniels, Alameda. Secretary, J. H. Severin, Oakland. Executive committee: The above officers, together with J. R. Murphy, Fresno; W. P. Stevens, Los Angeles; and J. I. Sedgely, San Francisco.

COLORADO. *Colorado State Dairymen's Association.* Organized 1908. Charter membership, 30; present membership, 300. Is not incorporated. Does not receive state aid. President, Jo C. Elstner, 1219 Corona street, Denver. Vice-president, M. M. Sinton, 419 South El Paso street, Colorado Springs. Secretary, B. G. D. Bishopp, 1421 Pearl street, Denver. Treasurer, W. A. Groom, Boulder. Educational work: Auxiliary meetings and dairy institutes in several sections of the State, exhibits at county and state fairs, with suitable premium lists and scoring contests, the publication of the Colorado Dairyman, working for favorable dairy legislation, organizing and fostering cow-testing associations. Police work: Enforcement of the oleomargarin laws.

CONNECTICUT. *Connecticut Dairymen's Association.* Organized 1882. Membership, 488. Incorporated 1889. Receives state aid, \$1,500. President, W. H. Lee, New Haven. Vice-president, G. Warren Davis, Norwich. Secretary, J. G. Schwink, jr., Meriden. Treasurer, B. C. Patterson, Torrington.

Connecticut Creamery Association. Organized 1890. Membership, 18. Not incorporated. Does not receive state aid. President, H. H. Ellsworth, Windsor. Vice-president, F. H. Stadtmueller, Elmwood. Secretary-treasurer, John M. Williams, Manchester.

Connecticut Milch-Goat Keepers' Association. Organized 1908. President, George W. Smith, Melrose. Vice-president, Milo N. Wooding, Hamden. Secretary, Alfred Dixon, West Hartford. Treasurer, James A. Smith, Hartford.

GEORGIA. *Georgia Dairy and Live-Stock Association.* Organized 1905. Membership, 100. Not incorporated. Does not receive state aid. The state commissioner of agriculture assists in printing the reports. President, James D. Price, Farmington. First vice-president, A. M. Soule, Athens. Second vice-president, G. F. Hunnicutt, Hopeville. Secretary, M. P. Jarnagin, Athens. Treasurer, C. L. Willoughby, Sandersville. Educational work, assisted by the dairy field agent of the state experiment station.

Atlanta Dairymen's Union. Object: Local work cooperating with the state association. President, A. M. Crosby, 712 Candler Building. Secretary, T. E. Harper, R. F. D. No. 3, Atlanta.

IDAHO. *Idaho State Dairy Association.* Organized 1899. Aided by private donations. President, D. R. Hubbard, Boise. Vice-president, R. H. Thornton, Weiser. Secretary, J. H. Frandson, Moscow. Treasurer, A. E. Gipson, Caldwell.

ILLINOIS. *Illinois State Dairymen's Association.* Organized 1874. Membership 500. Incorporated. Receives state aid, \$2,500. President, L. N. Wiggins, Springfield. Vice-president, Joseph Newman, Elgin. Secretary, George Caven, 154 Lake street, Chicago. Treasurer, Charles Foss, Cedarville. Educational work: Auxiliary meetings at different points in the State, one-day programmes.

Milk Producers' Institute of Illinois. Organized 1904. Incorporated. Receives state aid, \$500; other aid, exclusive of membership fees, \$500. President, D. D. Hunt, De Kalb. Vice-president, H. S. Early, Sycamore. Secretary, J. M. MacVean, 184 La Salle street, Chicago. Treasurer, L. E. Mentch, Cary. Educational work: A two-days' institute meeting at Hinkley, January, 1909.

Illinois Dairy Cattle Improvement Association. Organized 1907. Membership 25. Not incorporated. Does not receive state aid. President, A. O. Auten, Jerseyville. Vice-president, J. P. Mason, Elgin. Secretary, Charles F. Mills, Springfield. Treasurer, John Stuart, Elburn. Executive committee: T. W. Brophy, Ingleside, L. N. Wiggins, Springfield; C. J. Lindley, Greenville; E. M. Barton, Hinsdale; Charles Gilkerson, Marengo. Educational work: Dairy trains and other work by the Illinois State Dairymen's Association.

INDIANA. *Indiana State Dairy Association.* Organized 1891. Membership 145. Incorporated 1907. State aid, \$500; from the supply houses, \$200. President, D. B. Johnson, Mooresville. Vice-president, I. B. Calvin, Kewanna. Secretary-treasurer, J. D. Jarvis, Lafayette. Executive committee: The officers of the association, together with Samuel Schlosser, Plymouth; O. W. S. Warnock, Portland; James Bobbitt, Eckerty; and H. C. Wills, of the Purdue Experiment Station, Lafayette. Educational work: Annual meeting and three dairy meetings at different points in the State.

Northern Indiana Dairy and Creamery Association. Organized 1906. Membership 35. Not incorporated. Receives state aid, indirectly as auxiliary to State Dairy Association. President, W. V. Clifford, Kewanna. Vice-president, Samuel Schlosser, Plymouth. Secretary-treasurer, A. H. Compton, New Carlisle.

Southern Indiana Dairy and Cooperative Creamery Association. Organized 1906. Membership 120. Not incorporated. Does not receive state aid. President, James Bobbert, Eckerty. Vice-president, John Heitman, Holland. Secretary-treasurer, H. A. Reynolds, R. F. D. No. 2, Crothersville.

IOWA. *Iowa State Dairy Association.* Organized 1877. Membership 500. Incorporated. State aid, \$10,000. President, W. B. Barney, Hampton. Vice-president, F. W. Stephenson, Lamont. Secretary, W. B. Johnson, 1337 East Ninth street, Des Moines. Treasurer, F. L. Odell. Fieldman, H. G. Van Pelt. Educational work: Meetings at fifty to one hundred different points in the State, together with dairy specials over different railroads run for educational purposes.

Eastern Iowa Buttermakers' Association. Membership, 50. Not incorporated. Does not receive state aid. President, F. W. Stephens, Lamont. Vice-president, R. J. Erb, Masonville. Secretary, E. E. Mittlestadt, Delaware. Treasurer, J. B. Feldman, Dyersville.

North Central Iowa Buttermakers' Association. Organized September, 1902. Membership 30. Does not receive state aid. President, Charles L. Woodworth, New Hampton. Vice-president, H. E. Forrester, Fredericksburg. Secretary-treasurer, Frank Brunner, Charles City.

Farmers' Dairy Improvement Association of Southwestern Iowa. President, E. M. Bourne, Wiota. Vice-president, C. H. Matravers, Casey. Secretary, W. H. Skitt, Adair. Treasurer, H. H. Colbert, Menlo.

KANSAS. *Kansas State Dairy Association.* Organized 1888. Membership 300. Not incorporated. Does not receive state aid. Membership fees the sole source of revenue. President, T. A. Borman, Topeka. Vice-president, C. S. Graybell, Abilene. Secretary-treasurer, I. D. Graham, Topeka. Educational work: Cooperative with the farmers' institute department of the State Agricultural College.

Kansas Creamerymen's Association. Organized 1909. Membership 25. President, A. S. Kininmoth, Winfield. Vice-president, N. H. Skourup, Pittsburg.

Secretary, P. F. Edquist. Treasurer, L. E. Manley, Topeka. Object: To promote the interest of the small creameries in the State.

KENTUCKY. *Kentucky Dairy Cattle Club.* Organized 1906. Charter membership 27; present membership 250. Incorporated. Does not receive state aid. No other aid than membership fees. President, J. W. Newman, Versailles. Vice-president, E. A. Farra, Nicholasville. Vice-president, Ben McCloskey, Wakefield. Secretary-treasurer, J. J. Hooper, Lexington. Educational work: Local meetings held from time to time in different sections of the State. The club is endeavoring to build up Kentucky's dairy interests in every possible manner. Auxiliary associations: Fayette County Dairymen's Association, R. D. Collins, secretary, Lexington. Hardin County Dairymen's Association, W. A. Jenkins, secretary, Elizabethtown. Lincoln County Dairymen's Association, B. H. Van Allman, secretary, Stanford. McCracken County Dairymen's Association, S. A. Fowler, president, Paducah. Spencer County Dairymen's Association, Charles Huff, secretary, Taylorsville. Henry County Dairymen's Association, Charles Bright, secretary, Eminence.

MAINE. *Maine Dairymen's Association.* Organized 1898. Membership 200. Not incorporated. Receives state aid, \$700. President, W. G. Hunton, Readfield. Vice-president, L. E. McIntire, East Waterford. Secretary, Leon S. Merrill, Solon. Treasurer, R. Alden, Winthrop. Educational work: Annual dairy meeting and exhibits of dairy products.

Maine Creamerymen's Association. Organized 1903. Membership 25. President, W. K. Hamlin, South Waterford. Vice-president, E. L. Bradford, Auburn. Secretary, Elmer E. Harris, Skowhegan. Treasurer, J. D. McEdwards, Bangor. Annual meetings are held in connection with the Maine Dairymen's Association.

MARYLAND. *Maryland State Dairymen's Association.* Organized 1908. Membership 40. Incorporated. President, S. M. Shoemaker, Eccleston. Vice-president, A. W. Nicodemus, jr., Buckeystown. Secretary-treasurer, J. Alexis Shriver, Bel Air.

MASSACHUSETTS. *Massachusetts Creamery Association.* Organized 1895. Membership 30. Not incorporated. Does not receive state aid. President, Watson H. Wright, Easthampton. Vice-president, William Hunter, Ashfield. Secretary-treasurer, Aret M. Lyman, Montague. Educational work: Quarterly meetings in which the State College cooperates and furnishes speakers; cow-testing associations.

MICHIGAN. *Michigan Dairymen's Association.* Organized 1885. Membership 510. Incorporated. Receives state aid, \$300; other aid, exhibition space and contributions to premium fund, \$500. President, T. F. Marston, Bay City. Vice-president, F. H. Vandenoorn, Marquette. Secretary-treasurer, E. S. Powers, Ravenna. Educational work: Four auxiliary meetings each year. Annual meeting, Bay City, February 22-24, 1911.

Grand Traverse Dairymen's Association. Organized 1901. Membership 48. Not incorporated. Does not receive state aid. President, William F. Grant, R. F. D. No. 2, Traverse City. Vice-president, Frank Leshner, Mancelona. Secretary-treasurer, James Harris, R. F. D. No. 2, Traverse City.

Oceana County Dairymen's Association. Organized 1908. Object: Stimulation and development of the dairy industry throughout that section of Michigan. Meetings are held in each dairy community in the county. President, E. K. Smith, Hart. Vice-presidents, E. M. Fuller, G. O. Anderson, A. J. Kellogg, and E. B. Moore. Secretary-treasurer, Ernest B. Meyers, Hart.

MINNESOTA. *Minnesota State Dairymen's Association.* Organized 1877. Membership 850. Incorporated. Receives state aid, \$2,000 annually; \$2,000 special.

President, W. F. Schilling, Northfield. First vice-president, A. J. McGuire, Grand Rapids. Second vice-president, E. H. Eck, Cokato. Secretary, F. D. Currier, Nicollet. Treasurer, J. M. Jack, Stanton. Educational work: Local meetings of dairymen held during the year at 35 different places.

Minnesota State Butter and Cheese Makers' Association. Organized 1894. Membership 526. Incorporated in 1895. State aid, in 1909, \$494.19. President, James Pomeroy, Mapleton. Vice-president, E. O. Blomquist, Center City. Secretary, Edwin Hed, Nicollet. Treasurer, J. T. McCarty, West Concord.

Eastern Minnesota Dairymen's and Buttermakers' Association. Organized 1904. Not incorporated. Membership 153. Does not receive state aid. President, J. E. Lindberg, White Bear Lake. Vice-president, J. L. Wahlstrom, R. F. D. No. 1, Harris. Secretary, E. O. Blomquist, R. F. D. No. 1, Center City. Treasurer, A. P. Strand, Forest Lake. One vice-president for each of the eastern counties, namely, Chisago, Pine, Isanti, and Washington. Educational work: Meetings of dairymen and buttermakers at different points held under the auspices of the association for the promotion of the dairy industry and the mutual improvement of the members.

South Central Minnesota Buttermakers' and Dairymen's Association. Organized 1909. Membership 60. Not incorporated. Does not receive state aid. President, Peter Jensen, Mapleton. Vice-president, A. L. Vingel, Mankato. Secretary, T. C. Norman, Lake Crystal. Treasurer, Paul Kimble, Rapidan. Object: To help both buttermakers and dairymen to knowledge of better and more profitable methods.

Minnesota Cooperative Dairies Association. Organized 1907. Membership 109. Incorporated. Does not receive state aid. President and general manager, J. R. Morley, Owatonna. Vice-president, C. Soley, Maple Plain. Secretary, C. A. Morse, Sauk Center. Treasurer, John McClay, Hewitt. Educational work: Frequent local dairy meetings and cooperative marketing of Minnesota butter.

Red River Valley Dairymen's Association. Organized 1903. Membership 200. Not incorporated. Branch of the Minnesota State Dairymen's Association and receives a little aid from that body yearly, otherwise self-supporting. President, William Robertson,^a Crookston. Vice-president, Lewis Jensen, Clear Brook. Second vice-president, H. A. Lidenberg, Fosston. Secretary, O. A. Storvick, Crookston. Treasurer, C. M. Davidson, Climax.

MISSISSIPPI. *Mississippi Live Stock and Dairy Association.* Organized by a combination of the Mississippi Live Stock Association and the Mississippi State Dairymen's Association in 1909. Membership 200. President, Dr. Tait Butler, Starkville. Vice-president, J. S. Moore, Agricultural College. Secretary, A. Smith, Agricultural College.

MISSOURI. *Missouri State Dairy Association.* Organized 1890. Membership 500. Not incorporated. Does not receive state aid. President, P. P. Lewis, Crescent. Vice-president, W. S. Dille, Holden. Second vice-president, J. E. Roberts, Bolckow. Secretary, F. L. Austin, Columbia. Treasurer, I. T. Van Note, Columbia. Proceedings of the annual meetings are included in annual report of state board of agriculture.

Missouri Butter and Cheese Makers' Association. Organized 1907. Membership 30. Not incorporated. Does not receive state aid. Some aid from the State Dairy Association. President, W. S. Dille, Holden. Vice-president, L. A. Lyon, Rockville. Secretary, L. E. Cline, 303 Waugh street, Columbia.

^a Died January 11, 1910; Lewis Jensen acting president for this year.

MONTANA. *Montana State Dairymen's Association.* Organized 1906. Membership 50. Not incorporated. Does not receive state aid. President, Elmer Metcalf, Stevensville. Vice-president, W. H. Thompson, Great Falls. Educational work: Farmers' institute two months each spring, devoted to special creamery meetings.

NEBRASKA. *Nebraska Dairymen's Association.* Organized 1885. Membership 252. Not incorporated. Receives state aid, \$1,000. President, Charles Harding, Omaha. Vice-president, W. R. Wood, Omaha. Secretary-treasurer, S. C. Bassett, Gibbon. Educational work: Farmers' institutes, cooperative testing of dairy cows.

NEW HAMPSHIRE. *Granite State Dairymen's Association.* Organized 1884. Membership 85. Incorporated. Receives state aid, \$700; annual appropriation. President, George H. Yeaton, Dover. Vice-president, W. D. Hayden, Dover. Vice-president, Arthur B. Hough, Lebanon. Secretary, C. W. Phillips, East Candia. Educational work: Aids in forming cow-testing associations.

NEW YORK. *New York State Dairymen's Association.* Organized 1877. Life members 375; annual members 225. Incorporated 1881. Does not receive state aid; self-sustaining from advertising. President, J. D. Fredericksen, Little Falls. Vice-president, E. R. Harkness, Delhi. Secretary, R. R. Kirkland, Philadelphia. Treasurer, W. E. Griffith, Madrid. Assistant secretary, L. D. Spink, Attica.

New York State Butter and Cheese Makers' Association. Organized 1909. President, C. A. Publow, Ithaca. First vice-president, H. C. Lange, New York City. Second vice-president, J. F. O'Brien, Adams. Secretary, L. D. Spink, Attica. Assistant secretary, G. C. Dutton, South Otselic. Treasurer, J. S. Smith, Warsaw. Object of this organization, to educate members to a practical knowledge of creamery and factory operation, to promote progress in the art of butter and cheese making, and care and management of creameries and cheese factories.

Western New York Butter and Cheese Makers' Association. Organized 1910. Membership 100. Object: Advancement and improvement of the cheese and dairy industry. President, M. M. Congdon, West Clarksville. Vice-president, E. L. Jones, Delavan. Second vice-president, F. M. Holmes, East Otto. Secretary, George E. Hogue, Arcade. Treasurer, C. J. Clair, Little Valley.

NORTH CAROLINA. *North Carolina State Dairymen's Association.* Organized 1905. Membership 48. Not incorporated. Does not receive state aid. President, R. L. Shuford, Newton. Vice-president, A. L. French, R. F. D., Byrdsville, Virginia. Secretary-treasurer, J. A. Conover, West Raleigh.

NORTH DAKOTA. *North Dakota Dairymen's Association.* Organized 1891. Membership about 220. Not incorporated. Does not receive state aid. President, Theo. Kahalleck, Kenmare. Vice-president, L. B. Bassett, Marion. Secretary, R. F. Flint, Bismarck. Treasurer, Alfred Gabrielson, Fargo. Assistant secretary, Gust Kruempel, La Moure. Directors: A. W. Cunningham, Grand Rapids; John C. Christenson, New Salem; A. W. Lawrence, Hebron.

OHIO. *Ohio State Dairymen's Association.* Organized 1894. Membership 285. Not incorporated. Does not receive state aid. President, A. S. Neale, Macedonia. Vice-president, L. P. Bailey, Tacoma. Secretary-treasurer, Prof. Oscar Erf, State University, Columbus. Assistant secretary, O. C. Cunningham, Columbus. Educational work: Local dairy meetings, and a central meeting.

OKLAHOMA. *Oklahoma State Dairymen's Association.* Organized 1908. Membership 60. Not incorporated. Does not receive state aid. President, J. E. Nissley, Guthrie. First vice-president, J. F. Ball, Shawnee. Second vice-president, Robert Peebley, Oklahoma City. Secretary-treasurer, Prof. Roy C. Potts, Stillwater. Educational work: Annual meeting at Stillwater, and auxiliary

organized at Oklahoma City, 1908, known as the Oklahoma County Dairy Association. President, Emil Bracht. Vice-president, Robert Peebley. Secretary, S. J. Conner, Oklahoma City.

OREGON. *Oregon Dairymen's Association.* Organized 1892. Membership 204. Not incorporated. Does not receive state aid. President, F. L. Kent, Corvallis. First vice-president, M. S. Shrock. Second vice-president, J. D. Mickle. Secretary-treasurer, Carle Abrams, Salem. W. B. Duncan, traveling dairy inspector, maintained by private subscription.

PENNSYLVANIA. *Pennsylvania Dairy Union.* Organized 1898. Membership 300. Not incorporated. Receives occasional aid from the State. President, H. M. Stokes, Hanover. Vice-president, M. T. Philips, Pomeroy. Secretary, Prof. H. E. Van Norman, State College. Treasurer, W. D. Marshall, Lyndell.

SOUTH CAROLINA. *South Carolina Live Stock Association (including Dairy).* Organized 1902. Membership 60. Not incorporated. Receives state aid, \$500. President, W. D. Byrd, Laurens. Vice-president, in charge of the department of dairy cattle, T. P. Henderson, Phoenix. Vice-president, in charge of the department of dairy manufactures, C. H. Carpenter, Easley. Secretary-treasurer, J. M. Burgess, Clemson College.

SOUTH DAKOTA. *South Dakota Dairymen's and Butter Makers' Association.* Organized 1906. Membership 150. Not incorporated. Does not receive state aid. President, E. H. Baldwin, Belle Fourche. Vice-president, C. H. Winn, Castlewood. Secretary-treasurer, A. P. Ryger, Brookings.

TENNESSEE. *Tennessee Dairy Association.* Organized 1907. Charter members 46, present membership 100. Incorporated. Does not receive state aid. President, L. R. Campbell, Nashville. Vice-Presidents: For East Tennessee, Dr. M. Jacob, Knoxville; for Middle Tennessee, J. L. Bingham; for West Tennessee, Ford N. Taylor, Memphis. Secretary-treasurer, S. E. Barnes, Knoxville.

TEXAS. *Texas State Dairymen's Association.* Organized 1894. Membership 100. Not incorporated. Does not receive state aid. President, B. F. Frasher, Cleburne. Vice-president, C. H. Alvord, College Station. Secretary-treasurer, Prof. J. L. Thomas, College Station. Educational work: The annual meeting, held each year in July at College Station with the farmers' congress of Texas; local meetings held at such times and places over the State as conditions will permit.

Texas Creameries Association. Organized 1907. Sixty active, 10 associate members. Not incorporated. Does not receive state aid. President, Prof. C. H. Alvord, College Station. Vice-president, J. F. Kline, San Antonio. Secretary-treasurer, George Adams, Austin. Board of directors: The president and secretary, with W. T. Trousdale, Yoakum; W. B. Deland, Alvin; and H. C. Hodde, Brenham.

The Tri-State Dairy Association. Organized 1910. Membership 75. Not incorporated. Does not receive state aid. President, Avery Turner, Amarillo, Tex. Vice-president, L. Gough, Hereford, Tex. Secretary-treasurer, Perry O. Grove, Amarillo, Tex.

UTAH. *Utah State Dairy Association.* Reorganized 1909. Membership 35. Not incorporated. Does not receive state aid. President, Ben R. Eldredge. Vice-president, O. B. Hansen. Secretary, L. A. Merrill, all of Salt Lake City.

VERMONT. *Vermont Dairymen's Association.* Organized 1869. Membership 640. Not incorporated. Receives state aid, \$1,000, and about \$400 from advertising. President, F. L. Davis, Hartford. Vice-presidents: William O. Blood, Norwich; W. E. Carter, Rutland. Secretary, F. H. Bickford, Bradford. Treasurer, M. A. Adams, Derby.

VIRGINIA. *Virginia State Dairymen's Association.* Organized 1907. Membership 34. Incorporated. Does not receive state aid. President, D. H. Jones, Newport News. Vice-president, W. S. Crumpecker, Roanoke. Secretary-treasurer, W. D. Saunders, Richmond.

WASHINGTON. *Washington State Dairymen's Association.* Organized 1894. Membership 175. Not incorporated. Does not receive state aid. President, W. J. Langdon, Sumner. Vice-president, D. F. Sexton, Snohomish. Secretary-treasurer, Ira P. Whitney, Pullman.

Washington Creamery Operators' and Butter Makers' Association. Organized 1907. Membership 25. Not incorporated. Does not receive state aid. President, Hazen W. Maynard, Olympia. First vice-president, E. D. Fear, North Yakima. Second vice-president, Ira Whitney, Pullman. Third vice-president, K. O. Kjomme, Shelton. Secretary-treasurer, H. L. Reid, Centralia. Educational work: Butter-scoring contests held at different times in the year.

Western Washington Dairymen's Protective Association. Organized 1908. Membership 70. Not incorporated. Receives no state aid. President, Fred J. Mess, Orillia. Secretary, Oscar Christopher, Christopher. Treasurer, Walter J. Lunn, Auburn.

WEST VIRGINIA. *West Virginia State Dairy Association.* Organized 1903. Membership 120. Not incorporated. Receives no state aid. President, J. R. Wells, Bens Run. Secretary, C. A. Lueder, Morgantown.

WISCONSIN. *Wisconsin Dairymen's Association.* Organized 1872. Membership 200. Not incorporated. Receives state aid, \$3,000. President, H. D. Griswold, West Salem. Vice-presidents, all former presidents. Secretary, A. J. Glover, Fort Atkinson. Treasurer, H. K. Loomis, Sheboygan Falls. Educational work: Some one-day meetings in the month of June. Has organized 10 cow-testing associations on the dollar plan and has several associations operating on the 50-cents plan.

Wisconsin Dairy Manufacturers' and Milk Producers' Protective Association. Organized 1907. Specific object: To look after the interests of Wisconsin creamery and dairy men in the matter of rates for transportation of cream. President, F. A. Seeber, Waterloo. Vice-president, W. A. Roach, Waterloo. Secretary, J. G. Moore, Madison. Treasurer, H. Sorge, Reedsburg. Executive committee: C. A. Atwood, Waupun; W. E. Blumenstein, Sullivan; W. Schnieder, Johnson Creek. Meets at the call of the president.

Wisconsin Buttermakers' Association. Organized 1901. Membership 425. Incorporated. Receives state aid, \$600; other aid by advertising in programmes and by contributions to premium fund. President, J. P. Sauer, East Troy. Vice-president, A. G. Puerner, Gays Mills. Secretary, Prof. G. H. Benkenndorf, Agricultural College, Madison. Treasurer, S. B. Cook, Bloomer.

Wisconsin Cheesemakers' Association. Organized 1893. Membership 450. Incorporated. Receives state aid, \$600. President, J. B. McCready, Marshfield. Vice-president, A. C. Koehler, Plymouth. Secretary, U. S. Baer, 22 West Doty street, Madison. Treasurer, Patrick Wallace, Appleton. Director for three years, Jacob Karlen, Monroe; director for two years, J. W. Cross, Mauston; director for one year, J. Grootemont, Brillion.

Southern Wisconsin Cheesemakers' and Dairymen's Association. Organized 1901. Membership 450. Incorporated. Receives state aid, \$1,000 per year. President, S. J. Stauffacher, Monroe. Vice-president, Alexander Schaller, Barneveld. Secretary, Henry Elmer, Monroe. Treasurer, Dallas E. Davis, Monroe. Cheese factory instructor, Chris. Schenk, Lancaster. Educational work: Meetings with patrons of cheese factories as needed regarding cleanliness of milk, cows, and factories.

Northwestern Wisconsin Buttermakers' Association. Organized 1908. Membership 62. Not incorporated. Does not receive state aid. President, S. B. Cook, Bloomer. Vice-president, L. H. Winter, Eau Claire. Secretary, W. A. Voigt, Eau Claire. Treasurer, J. C. Miller, Augusta. Director, R. C. Gower, Rusk.

Dunn County Dairymen's and Breeders' Association. Organized 1908. Membership 70. Not incorporated. Does not receive state aid. President, E. C. Jacobs, Elk Mound. Vice-presidents, one in every township. Secretary, G. A. Gilbert, Menomonie. Treasurer, J. S. Govin, Menomonie. Object: To promote the breeding and improvement of high-grade and purebred dairy cattle, to establish and maintain cordial relations between its members, and by cooperation to promote the general dairy interests of Dunn County. Two meetings are held every year.

Dane County Buttermakers' Association. Organized 1907. Membership 55. Not incorporated. Does not receive state aid. President, H. B. Hoiberg, Brooklyn. Vice-president, O. Olsen, Mount Horeb. Secretary-treasurer, J. G. Moore, Madison.

Brown County Buttermakers' Association. Organized 1904. Not incorporated. Does not receive state aid. President, James F. McGill, Little Suamico. Vice-president, George Borchert, R. F. D. No. 4, Green Bay. Secretary, John Boerschinger, R. F. D. No. 3, Green Bay. Treasurer, Clay Tyler, West De Pere.

CANADIAN.

ONTARIO. Eastern Ontario Dairymen's Association. Organized 1869. Membership 300. Incorporated. Receives state aid, \$2,000 per annum, with some occasional private contributions. President, H. Glendenning, Manilla. First vice-president, J. H. Singleton, Smiths Falls. Second vice-president, T. A. Thompson, Almonte. Secretary, R. G. Murphy, Brockville. Treasurer, J. R. Anderson, Mountain View. Educational work: Special dairy meetings.

Dairymen's Association of Western Ontario. Organized 1867. Membership 330. Receives state aid, \$2,000 per annum. President, John H. Scott, Exeter. First vice-president, William Waddell, Kerwood. Secretary-treasurer, F. Hems, London. Educational work: District and patrons' meetings; work in conjunction with the Ontario department of agriculture to improve the quality of dairy products and the sanitary condition of the cheese factories and creameries of western Ontario through the employment of dairy experts as instructors; farms of patrons visited and instruction given in milk production. Chief dairy instructor for western Ontario, Frank Hems, London.

CITY MILK PRODUCERS' ASSOCIATIONS.

Chicago Milk Shippers' Union (Chicago, Ill.). Organized 1897. Membership 600. Not incorporated. Revenue from membership fees and donations. Educational work: Addresses at various points in the State by the secretary of the association; one or more meetings each year for lectures and discussions. President, J. P. Mason, Elgin, Ill. Vice-president, L. Robbins, McCool, Ind. Secretary-treasurer, H. B. Farmer, 99 Randolph street, Chicago.

Milk Producers' Association (Chicago, Ill.). Organized 1909. Membership 3,536, divided as follows: Illinois, 2,955; Indiana, 305; Wisconsin, 276. Incorporated. Does not receive state aid. Object: To promote the business interests of milk producers in the territory adjacent to Chicago. President, E. J. Fallows, St. Charles, Ill. Vice-presidents, John Gruel, Lake County, Ind.; C. E. Williams, Genoa Junction, Wis.; Ralph W. Chittenden, Gurnee, Ill. Secretary, James P. Grier, 1208 Ashland Block, Chicago. Treasurer, J. F. Martin, Antioch, Ill.

Milk Producers' Association of Maryland, Virginia, and District of Columbia. Organized 1903. Membership about 300. Incorporated. President, John Thomas, Ednor, Md. Vice-president, J. B. Diamond, Gaithersburg, Md. Secretary, T. Lamar Jackson, Silver Spring, Md. Treasurer, J. W. Roberts, Alexandria, Va.

Five States' Milk Producers' Association. Organized 1898. Membership 2,500. Object: To have a voice in fixing prices paid to producers for milk shipped to New York, Boston, and Chicago markets. President, Ira L. Snell, Kenwood, N. Y. Vice-president, O. P. Moore, Roxbury, N. Y. Secretary-treasurer, H. T. Coon, Homer, N. Y.

Boston Cooperative Milk Producers' Company. Organized 1904. Membership 2,400. Incorporated. Does not receive state aid. President, S. H. Abbott, Wilton, N. H. Vice-president, J. K. Mills, Northboro, Mass. Secretary, W. A. Hunter, 35 Stafford street, Worcester, Mass. Treasurer, Jonas Bemis, Charlton Depot, Mass. Members of the company ship milk to the Boston market.

The Dairymen's League. Organized 1907. Membership 2,200. Incorporated. Object: To have a voice in fixing prices paid to producers for milk shipped to New York markets. President, J. Y. Gerow, Washingtonville, N. Y. Vice-president, W. D. Tallman, Highland, N. Y. Secretary, Albert Manning, Otisville, N. Y. Treasurer, Lewis M. Hardin, Sussex, N. J.

Santa Monica Bay Milk Producers' Association (California). Organized 1909. Charter members 15. Object: To study sanitary conditions with a view to effecting improvement along broad and modern lines. President, W. A. Leach, Venice. Secretary, M. Low, Palms.

CITY MILK DEALERS' ASSOCIATIONS.

Philadelphia Milk Exchange (Philadelphia, Pa.). Organized 1886. Membership 150. Incorporated. President, Harry W. Scott. Vice-president, S. Abbott, Willits. Secretary, Joseph H. Gravenstine, 1537 North Twenty-third street. Treasurer, H. Dolfinger.

Consolidated Milk Exchange (New York, N. Y.). President, J. A. McBride, Sussex, N. J. Vice-president, W. B. Conklin, New York, N. Y. Secretary, Fred E. Seiler, Newark, N. J. Treasurer, Joseph Laemmle, 202 Bleecker street, New York, N. Y.

San Francisco Wholesale Dairy Produce Exchange (San Francisco, Cal.). President, W. H. Roussel. Vice-president, D. Richard Martens. Secretary, W. D. McArthur, 80-82 Merchant street. Treasurer, F. E. Booth.

South Side Milk Dealers' Business Club (3900 Wentworth avenue, Chicago, Ill.). President, John Stevenson. Vice-president, T. T. Smith. Secretary, Adolph G. Kirbach, 7237 Greenwood avenue. Treasurer, J. Gregorson.

Dairymen's Association of District of Columbia, Maryland, and Virginia. Organized 1895 as "The Milk Dealers' and Producers' Association of District of Columbia, Maryland, and Virginia; name changed May 20, 1908. Membership 20. Not incorporated. President, George B. Farquhar, 2016 Fourteenth street NW., Washington. Vice-president, W. A. Hartranft, 107 Seventh street NE., Washington. Secretary, John T. Brosius, 330 New Jersey avenue NW., Washington. Treasurer, A. S. Trundle, 246 I street NW., Washington.

DAIRY INSTRUCTION.

Most of the state agricultural colleges and some other institutions offer courses in dairying, varying in length from only a few weeks to four years. Instruction is given by lectures, laboratory practice, and work in the dairy. There are few entrance requirements to the short courses.

All of the instruction given in the short courses is offered to the students taking longer dairy courses or the full college courses in agriculture. The latter students specialize along lines in which they are most interested.

The names of the institutions at which instruction in dairying is given, the kind and amount of the work, as well as the season when offered, together with the names and addresses of instructors in charge, to whom requests for further information may be sent, are stated below:

ALABAMA. *Alabama Polytechnic Institute.* College course, dairying, sophomore year, September 6 to December 20. This work consists of two hours per week lectures and four hours per week laboratory work. Sophomore year, January 1 to March 7, four hours per week judging dairy cattle. Senior year, March 7 to June 1, two hours per week in lecture work in dairy farming. First term, September 8 to December 20. Lectures and laboratory work for senior veterinary students. Lectures twice a week. Laboratory work four hours a week. Address Prof. Dan T. Gray, Auburn.

Agricultural School of the Tuskegee Normal and Industrial Institute. (Colored.) Regular course, farm dairying two years. Short course of two weeks for farmers. Dairy extension work is carried on with the Jesup wagon, which is a traveling school of agriculture, giving dairy instruction throughout the country. Milk is purchased from farmers to encourage diversified farming. Address Prof. G. R. Bridgeforth, Tuskegee Institute.

ARIZONA. *University of Arizona.* Short course in agriculture. Dairying, second year. Production of sanitary milk on the farm, the management and care of a dairy herd, the composition and properties of milk, the manufacture of dairy products. Five hours, first semester. Four units. Address Prof. W. L. Fowler, Tucson.

ARKANSAS. *College of Agriculture of the University of Arkansas.* College course, one term, nineteen weeks, four hours per week required of all sophomores in the agricultural course. Two years' course in agriculture, sixteen weeks, twenty-eight lectures and thirty-two laboratory periods devoted to dairying. Elective courses, dairy cattle, herd formation and management, milk testing, city milk supply, butter making, cheese making, factory management, scoring butter and cheese. Work of dairy extension carried on through farmers' institutes. Address Prof. Victor A. Hooper, Fayetteville.

CALIFORNIA. *College of Agriculture of the University of California.* Regular college course, junior and senior years. Milk technology, market milk, dairy survey, dairy manufactures, creamery management, special dairy products, research work; given during second semester, arranged to allow four to six hours lectures and laboratory per week. Short courses on dairy manufactures and market milk, lectures two to three hours daily; practice in separating, pasteurizing, ripening, packing, dairy bacteriology, creamery accounting, machinery, and herd improvement. The courses for regular students of agriculture are technical and prepare the student to grasp the principles underlying the production of clean milk and its subsequent manufacture into butter, cheese, and other products. The short courses, which are designed to aid the butter maker, cheese maker, and market milkman, are less technical than the regular courses, but are useful in affording an opportunity of making and handling milk and milk products under competent instructors. All courses in dairy industry offered by the university are given at the university farm, Davis. Address Prof. H. A. Hopper, University Farm, Davis.

California Polytechnic School. Regular course in dairying, third year, two periods recitation and four periods laboratory per week for thirty-two weeks. This includes work in dairy machinery, milk testing, and butter and cheese

making. Work in judging, breeding, and feeding dairy cattle is given with the regular animal husbandry classes as follows: Breeds and judging, five periods recitation and eight periods practice per week for twelve weeks; feeding, three periods per week for twenty weeks. A four weeks' short course for the milk producer and a similar course for the dairy manufacturer is given each year. Address Prof. C. W. Rubel, San Luis Obispo.

COLORADO. *The State Agricultural College of Colorado.* College course taught in junior year; thirty-six hours of theory and thirty-six hours of practice. School of agriculture course, farm dairying, sixty hours. In addition to this work, the students in both courses get dairy live stock work, judging, feeding, etc. Extension-dairy work is handled through farmers' institutes at present. Address Prof. Charles A. Lory, President, Fort Collins.

CONNECTICUT. *Connecticut Agricultural College.* Instruction given in regular college course as follows: General dairying, fall term, three hours per week. This course consists largely of a study of milk, its composition, proper methods of handling, and laboratory practice with the Babcock test. Animal breeding, fall term, three hours per week. This course deals with the principles of breeding and the practical problems of selection, systems of breeding, and general improvement of live stock. Feeding, third year, fall term, five hours per week. Dairy breeds, fall term, two hours per week lectures, four hours per week laboratory. Practice given in judging animals, use of score card, and making out pedigrees. Dairy-herd management, winter term, three hours per week. Special attention given to the work of dairy-farm managers and to the construction and arrangement of farm buildings. Winter term, dairy investigation, four laboratory hours per week. Dairy manufactures, spring term, three lectures per week and nine hours laboratory work. Instruction in producing and marketing milk and cream and in the manufacture of butter. Short courses give special attention to modern methods of handling a city milk supply and to the manufacture of butter; instruction is also given in feeding and handling the dairy herd. Address Prof. J. M. Trueman, Storrs.

FLORIDA. *University of the State of Florida.* College course, freshman year, sixteen weeks, three hours per week. Short course, dairying, same as long course. Twelve weeks' course for farmers, two hours per week for six weeks. Dairy extension through farmers' institutes. Address Prof. J. J. Vernon, Gainesville.

Florida Agricultural and Mechanical College for Negroes. Dairy instruction is given to the high school and senior students as may be arranged throughout the school year. In this course the home dairy, its location, equipment, and source of milk supply are considered. Modern dairy apparatus in use is studied and theoretical instruction given in detail concerning all necessary dairy machinery. The art and principles of butter making, theory and practice of milk testing and milk inspection, and everyday rules of the best practice in modern dairies of any size or place are studied. The school's dairy is well equipped to afford practice to students in dairying. Address Prof. F. H. Cardozo, Agricultural Department of the Florida Agricultural and Mechanical College for Negroes, Tallahassee.

GEORGIA. *Georgia State College of Agriculture.* Seven thousand feet of space in the new agricultural building has been set aside for work in dairying. Purebred and grade herds of Jerseys and Holstein-Friesians are maintained for experimental work and teaching. The college maintains a commercial dairy so that the student has the opportunity of studying all phases of dairy work. Address Prof. Milton P. Jarnagin, Athens.

HAWAII. *College of Hawaii.* Dairy extension consists of lectures and personal visits to city dairies where advice is given by the head of the department. A

course in dairying is offered for the fall semester, beginning with September, 1910. Address Prof. B. E. Porter, Honolulu.

IDAHO. *College of Agriculture of the University of Idaho.* Department of dairying, four years' course. One year commercial course in dairying. Sophomore year, farm dairying, milk testing and inspection. Junior year, first semester, dairy bacteriology, advanced butter making; second semester, cheese making. Senior year, first semester, dairy seminar, dairy breeds and types of dairy cattle, dairy chemistry. Second semester, dairy seminar, judging dairy products, milk technology, ice cream and ices, factory management, milk production. The one-year course includes butter making, milk testing, cheese making (including American cheese and its manufacture), dairy bacteriology, scoring butter, and dairy practice, a creamery operated on a commercial scale. Farmers' short course includes work in farm dairying, milk testing and its value, feeding dairy cows. Address Prof. J. H. Frandson, Moscow.

ILLINOIS. *College of Agriculture of the University of Illinois.* Department of dairy husbandry. Dairying required in freshman year, three hours per day, nine weeks. Elective courses: Milk, dairy cattle, feeding and care of herd, purebred herds, dairy farm management, city milk supply, dairy bacteriology, butter making, cheddar cheese, fancy cheese, factory management, development of the dairy industry. Dairy extension work, testing cows, feeding demonstrations, and creamery work. Address Prof. W. J. Fraser, Urbana.

INDIANA. *School of Agriculture of Purdue University.* Dairy school, four years' course, eight weeks' course, two weeks' course, one-week course. College course, sophomores, one semester, thirty-nine hours lectures and one hundred and seventeen hours laboratory. Juniors, two semesters, seventy-three hours lectures and two hundred and nineteen hours laboratory. Seniors, two semesters, one hundred and forty-six hours lectures and two hundred and nineteen hours laboratory. Short courses: Eight weeks' course. (a) *Farm dairy course*, one hundred and sixty-four hours lectures and one hundred and forty hours laboratory. (b) *Creamery course*, one hundred and four hours lectures and two hundred hours laboratory. Two weeks' course for advanced butter makers, thirty-eight hours lectures, thirty-eight hours laboratory. One-week course for farmers twelve hours lectures, six hours laboratory. The two weeks' short course is strictly for advanced butter makers and eight-weeks creamery students who desire to receive certificates. A one-week short course to farmers deals with economic and sanitary milk production. Dairy extension by herd tests, dairy meetings, dairy and creamery inspection, butter-scoring contests and special dairy trains. Address Prof. Otto F. Hunziker, Lafayette.

IOWA. *Iowa State College of Agriculture and Mechanic Arts.* Dairy school, four years' course, one year's course, two weeks' course. College course, freshman year, thirty-two hours lectures, thirty-two hours laboratory; sophomores, forty-eight hours lectures, ninety-six hours laboratory; juniors, sixty-six hours lectures, one hundred and twenty-eight hours laboratory; seniors, one hundred and sixty hours lectures and one hundred and sixty hours laboratory, counting credits for thesis and research. Additional elective work is offered in a one-year's course, two hours daily lectures and four hours laboratory; in a two-weeks' course, thirty-six hours lectures and forty-eight hours laboratory; a short course in butter making and farm dairying including principles and practice; dairy extension work in testing cows, organizing test associations and in institute work. Address Prof. Martin Mortensen, Ames.

KANSAS. *Kansas State Agricultural College.* Department of dairy husbandry. Four years' course, two ten-weeks' courses in dairy production, one ten-weeks' course in commercial dairying, one-week courses in dairy farming during state farmers' institute, and a series of four-day courses in cream testing. College course, dairy-

ing, second year, first term, twenty-six hours lectures and fifty-two hours laboratory. Dairy stock, second year, first term, thirteen hours lectures, twenty-six hours laboratory. The above courses are required of all students in the four-year agricultural group. Third year, first term, butter making; second term, milk production and dairy-farm management; third term, cheese and ice cream making. Fourth year, first term, experimental dairying, dairy mechanics; second term, special dairy products manufacture, feeding dairy cattle, dairy equipment; third term, milk inspection, herd management, dairy seminar. Short courses in dairying, January to March. Course in commercial dairying, January to March. The extension department is exercised in farmers' institutes, special dairy meetings, organizing test associations, assisting in construction of silos, dairy barns, and other dairy buildings. Address Prof. Ed. H. Webster, Dean and Director, Agricultural Experiment Station, Manhattan.

KENTUCKY. *The State University.* College course, dairying, offered all agricultural students, winter term, junior year, three hours lectures, six hours practice per week. Advanced dairying, winter term, senior year, two hours lectures with laboratory periods as arranged later. Short course, winter term, three hours per week class room and six hours laboratory per week. Extension work in farmers' institutes, dairy meetings, and inspection of creameries. The dairy work will be enlarged as rapidly as possible. A well-equipped farm dairy laboratory has been added to the facilities of this department. Address Prof. J. J. Hooper, Lexington.

LOUISIANA. *Southern University and Agricultural and Mechanical College.* Dairy school, two years' course; one-half the time is given to theory and one-half to practice. The course of instruction aims to prepare students to become practical dairy men and women, whether furnishing milk for city consumption or making butter. Such rations as will give the best results by feeding Louisiana products as far as practicable are studied. Address Southern University and Agricultural and Mechanical College, New Orleans, La.

Louisiana State University and Agricultural and Mechanical College. A course of lectures is given in farm dairying and full instruction in regard to running dairy machinery and the manufacture of butter and cheese. Students receive instruction in regard to characteristics of the various breeds of dairy cattle and have practice work in judging dairy stock. Lectures are given on the principles of feeding. Practice work is afforded in compounding rations and estimating the comparative value of foodstuffs. Address Prof. W. R. Dodson, Baton Rouge.

MAINE. *College of Agriculture of the University of Maine.* College course. Dairying in the junior year, first semester, two hours per week—one-half lectures, one-half practice. Second semester, two hours lectures and seven hours practice per week. Elective in senior year. School course, thirty hours lectures and seven hours practice per week during one semester. Short course, four weeks, thirty-two hours lectures and eighteen hours practice per week. Dairy extension by reading courses and lectures at farmers' institutes and grange meetings. Address Prof. P. A. Campbell, Orono.

MARYLAND. *Maryland Agricultural College.* College course, dairying, junior year, third term, ten weeks, three hours practice per week. Two years' course, third term, two hours lectures, three hours practice per week. Short course, winter, ten weeks. Dairy extension by farmers' institutes. Address President R. W. Silvester, College Park.

MASSACHUSETTS. *Massachusetts Agricultural College.* College course, junior year, thirty-six hours lectures, thirty-six hours laboratory work. Senior year, thirty-six hours lectures, thirty-six hours laboratory work. Short winter course, ten weeks. Dairy farming, creamery practice, and market milk work. Address Prof. W. P. B. Lockwood, Amherst.

MICHIGAN. *Michigan State Agricultural College.* Dairy school, four winter courses; creamery, eight weeks elementary, eight weeks advanced (open only to those who have completed the elementary course); cheese making, four weeks; farm dairying, eight weeks. College course, dairying, sophomore year, twelve weeks, one and one-half hours theory and two hours practice per week. Senior year, thirty-six weeks, five hours theory and ten hours practice per week. Address Prof. A. Crosby Anderson, East Lansing.

MINNESOTA. *College of Agriculture of the University of Minnesota.* Dairy school, creamery, cheesemaking, four weeks in winter. College course, one and one-half years' class work, one year practice. School of agriculture, six months lectures and practice work on milk production and farm dairy manufacturing. Farmers' short course, four weeks practice in judging and lectures on dairy husbandry; short course for creamery managers. Dairy extension work by lectures on dairy stock and milk production to farmers over the State, organizing test associations and the selection of dairy sires for community breeding. Address Prof. T. L. Haecker, University Farm, St. Paul.

MISSISSIPPI. *Mississippi Agricultural and Mechanical College.* College course, dairying, sophomore year, one term, eight hours per week. Junior year, one term, eight hours per week. Senior year, three terms, elective, six hours per week. Short course in farm dairying for two weeks during the summer months. Address Prof. J. S. Moore, Agricultural College.

MISSOURI. *College of Agriculture and Mechanic Arts of the University of Missouri.* College course, elements of dairying required one semester freshman year, thirty-four hours lectures, fifty-four hours practice. Elective, one hundred and two lectures and one hundred and two periods of laboratory practice in milk production and dairy manufactures. Short course, fourteen weeks beginning first week in November, two hours lectures, four hours practice per day. Dairy extension work by lectures in farmers' institutes and branch short courses and material for popular distribution. Address Prof. C. H. Eckles, Columbia.

MONTANA. *Montana State College of Agriculture and Mechanic Arts.* Dairy school, special creamery course, one month, beginning with February. College course, dairying given in freshman, junior, and senior years. Dairy work given in school of agriculture course, one-half year for each of three years. Dairy extension work in cooperation with creameries of the State with a view to improving dairy herds. Assistance at farmers' institutes in developing the dairy industry in the State, also six weeks each spring devoted to visiting creameries of the State that apply for special meetings. Address Prof. R. W. Clark, Bozeman.

NEBRASKA. *College of Agriculture of the University of Nebraska.* Dairy school, long course, twenty-four weeks, begins with November; two hours lectures and four hours practice per week. College course, first and second years, sixteen weeks each, with four hours practice and two hours lectures per week. Short course, dairying, nine weeks, beginning with January, four hours practice and two hours lectures. Dairy extension work in farmers' institutes. Address Prof. A. L. Haecker, Lincoln.

NEVADA. *College of Agriculture of the University of Nevada.* Short courses in dairying during the months of January, February, and March of each year for benefit of the ranchers. Address Director J. E. Stubbs, Reno.

NEW HAMPSHIRE. *New Hampshire College of Agriculture and the Mechanic Arts.* Dairy school, ten weeks, beginning with January, three hours laboratory and three hours recitation, daily. Four years' course; junior year, two lectures and six hours laboratory work per week for seventeen weeks. Two years' course, two lectures and six hours laboratory work per week for sixteen weeks. Several

elective courses are offered to both four and two year students. Dairy extension work: Addressing grange meetings, farmers' institutes, and organizing test associations. Address Prof. Fred Rasmussen, Durham.

NEW JERSEY. *The New Jersey State College for the Benefit of Agriculture and the Mechanic Arts.* College course, senior year, two terms, lectures and laboratory work in dairy and milk-testing rooms, stock judging. Short courses, three months, beginning the first week in December. This course includes lectures in milk testing, butter making, stock judging, making of rations, and laboratory practice in all branches. The professors frequently lecture on dairy husbandry before farmers' institutes and other meetings. Address Prof. F. C. Minkler, New Brunswick.

NEW MEXICO. *New Mexico College of Agriculture and Mechanic Arts.* College course, dairying, second semester, sophomore year, one hour lecture, four hours practice per week. Elective for seniors, first semester, two hours lecture, two hours practice per week. Industrial course in agriculture; farm dairying, five hours per week for nine weeks. Lectures and practice, first semester, second year. Address Prof. H. H. Simpson, Agricultural College.

NEW YORK. *New York State College of Agriculture.* College courses given in the following subjects: Composition of milk, butter making, cheese making, fancy cheese making, market milk and milk inspection, elementary dairy bacteriology, dairy mechanics, advanced dairy bacteriology, dairy equipment, and business-methods investigations. These courses represent one to four hours per week each, and altogether would require more than half of a student's time for two years. The work is about one-half in the class room and one-half in the laboratories. Capacity about 200 students. Winter dairy course includes instruction in composition of milk, butter making, cheese making, fancy cheese making, market milk handling, dairy mechanics, dairy bacteriology, elementary chemistry, diseases of animals, feeds and feeding. This course begins early in December, continues twelve weeks, and requires all of the time of a student. The work consists of about three-fourths practice and one-fourth lectures and recitations. Capacity 125 students. Farm dairying given to students taking the short winter course in general agriculture, three hours per week, or one-fifth of a student's time; includes milk testing and farm butter making; two-thirds of this is practice. Capacity 75 students. Dairy extension work by correspondence and reading course lessons, cow-testing work. Address Department of Dairy Industry, College of Agriculture, Ithaca.

New York State School of Agriculture at Alfred University, Alfred. Farm dairying; first year, first term, four times a week; butter making, second year, first term, three times a week; cheese making, second year, second term, three times a week; creamery practice, third year, first term, two times a week. A school year consists of two terms of twelve weeks each. Address W. Truman Crandall, Alfred.

New York State School of Agriculture at St. Lawrence University, Canton. The course of study for 1908-9 included dairying in the second and third quarters of the first year. Address Herbert E. Cook, Dean, Canton.

NORTH CAROLINA. *The North Carolina College of Agriculture and Mechanic Arts.* College course, freshman year, spring term, thirty hours lectures, sixty hours practice; senior year, dairying, elective, six hours per week. Two-year agricultural course, first year, fall term, thirty lecture periods, ninety hours practice. Short course in general agriculture including forty periods dairying, eight weeks beginning with January. Dairy extension work by correspondence and farmers' institute work. Address Prof. John Michels, West Raleigh.

The Agricultural and Mechanical College for the Colored Race. Two years' dairy course, equally divided between theory and practice. Short course, four weeks in winter. Address Prof. E. F. Colson, Greensboro.

NORTH DAKOTA. *North Dakota Agricultural College.* College course, farm dairying, senior year, sixty hours lectures, seventy-four hours practice. Three years farm-husbandry course, sixty hours lectures, seventy-four hours practice. Short course, farm dairying, winter, ten weeks, thirty hours lectures, forty-eight hours practice. Address: Prof. George L. Martin, Agricultural College.

OHIO. *College of Agriculture of Ohio State University.* Dairy school, ten weeks' course beginning January 11. Special two weeks' courses are given during January, February, and March. Special ten weeks' course in dairy farming, elective only to students in the short course in agriculture, two lecture periods and two half-day laboratory periods per week. In the two-year agricultural course, elementary dairying is required in the first term; dairy equipment, second term; farm dairying, third term, two lectures and two laboratory periods per week. College course in agriculture, dairying required first term, junior year, two lecture and two laboratory periods per week. College course, electives in junior and senior years, two lectures and two three-hour laboratory periods per week. Special work is given in the manufacture of butter, cheese, ice cream, milk condensing, etc., testing of milk and its products, dairy mechanics, and dairy equipment. Household dairying, spring term, two hours per week. Milk inspection, first term, two hours per week. Dairy extension work, one man devotes his entire time to such work. Address Prof. Oscar Erf, Columbus.

OKLAHOMA. *Oklahoma Agricultural and Mechanical College.* Department of dairy husbandry, college course; ten weeks in dairy farming, four weeks in creamery butter making. Two weeks in ice-cream making; three one-week courses in milk and cream testing; industrial butter makers' course; teachers' summer normal courses. Farm dairying required in sophomore year, seven hours per week, ten weeks' course. Elective course in advanced dairying, junior year, one term, seven hours per week. Senior course in dairying, including butter making, fall term; cheese making, business of dairying and factory management, winter term; dairy engineering and ice-cream making, spring term. Four weeks' course in creamery butter making includes lectures and text-book work, feeds and feeding, breeding, diseases, and care of dairy cattle; lectures and laboratory work on engines, boilers, ice, and refrigerating machinery; lectures and practical work in creamery bookkeeping and creamery accounting, and practical work in churning, testing, pasteurizing, and making and using starters. Two weeks' course in ice-cream making includes lectures and practical work, also receiving, sampling and weighing, and testing milk and cream. Industrial butter makers' course includes lecture work supplementing the practicum work obtained. Dairy extension work in organizing cooperative creameries, county dairy associations, cooperative circuit breeding clubs, cow-testing associations, conducting dairy institutes and butter-scoring contests. Address Prof. Roy C. Potts, Stillwater, Okla.

OREGON. *Oregon State Agricultural College.* College course in dairy husbandry, dairying in secondary, sophomore, junior, and senior years; lectures, text, and practice. Dairy school, six weeks, lectures and practice, designed for inexperienced men. Lectures and demonstration. Home dairying for domestic-science students, two credits for one semester. Address Prof. F. L. Kent, Corvallis.

PENNSYLVANIA. *The Pennsylvania State College.* College course in dairy husbandry, a total of one hundred and eighty-seven hours lectures and recitations and four hundred and forty-two hours laboratory practice during junior and senior years in butter, cheese, and ice-cream making, dairy cattle, farm and factory management, dairy cattle and product judging, market milk and inspection work. Two hours lectures and two hours practice required of all agricultural students.

Winter courses, twelve weeks, milk production, factory and farm butter, cheese, and ice-cream making, testing, judging, breeding, and feeding dairy cattle. Special work farmers' week, during the college Christmas recess. A commercial creamery and dairy herd in connection with dairy school. Extension work, herd tests, butter makers' educational contest. Address Prof. H. E. Van Norman, State College.

National Farm School, Doylestown. Dairying and practical work in butter making, four hours a week in the spring term of the sophomore year.

RHODE ISLAND. *Rhode Island State College.* College course, dairy practice, lectures and laboratory; junior year, seventy-two hours, two and one-half credits for first half year required of agricultural students; senior year, fifty-four hours, two credits second half year, elective for agricultural students in animal husbandry. Short course in agriculture, dairy practice, laboratory work, second year, first term, thirty-six hours, one credit. Address Howland Burdick, Instructor in Dairying, Rhode Island State College, Kingston.

SOUTH CAROLINA. *Clemson Agricultural College of South Carolina.* College course, dairying, junior year, seven months, four hours theory, four hours practice per week. Dairy extension work in farmers' institutes. Address Prof. D. O. Nourse, Clemson College.

The Colored Normal, Industrial, Agricultural, and Mechanical College of South Carolina. Instruction in dairying and cheese making. Address President Thomas E. Miller, Orangeburg.

SOUTH DAKOTA. *South Dakota State College of Agriculture and Mechanic Arts.* Four years' dairy course leading to the degree B. S. Fifteen hours dairy lectures and fifteen hours laboratory work each week during two years; advanced dairy work in the laboratories. Three months' dairy course leading to a dairy certificate, eighteen hours lectures and daily practice in college creamery are required per week. Students may specialize in butter or cheese making or in economic milk production. Two weeks' winter course for experienced creamery men. One week cream-testing and cream-receiving course. Address Prof. C. Larsen, Brookings.

TENNESSEE. *College of Agriculture, University of Tennessee.* Dairy school, creamery, farm dairy, judging, principles of dairying, two weeks in February. College course, sophomore year, first term, principles of dairying; junior year, second term, dairy farming; senior year, first and second terms, elective dairy work. Summer school, principles of dairying, dairy practice, and dairy farming, two weeks in June. Instruction in the summer school is adapted to teachers in county and city schools with a view to creating a wider interest in dairy education. Dairy extension work by farmers' institutes and farmers' conventions held in different parts of the State. Address Dairy Department, University of Tennessee, Knoxville.

TEXAS. *Agricultural and Mechanical College of Texas.* College course, junior year, one term, twelve weeks, two hours theory and two and one-half hours practice required of all courses in agriculturture. Senior year, elective, one term, twelve weeks, three hours theory and two and one-half hours practice per week in dairy bacteriology, and two terms advanced dairying, three hours theory and two and one-half hours practice per week. Two years' course in agriculture required, one term, second year, three hours theory and two and one-half hours practice. A short course is given during the summer, six weeks immediately following the regular session, for men who expect to engage in the creamery business as managers or butter makers. Limited to twelve men. Opportunity also is afforded for practice in judging dairy cattle. Thirty hours practice per week. Address Prof. Charles H. Alvord, College Station.

UTAH. *The Agricultural College of Utah.* College course, junior year, eighteen weeks dairying, two-thirds practice, three hours per week. Senior year, first term, eighteen weeks. Short winter course for farmers and factory men, four weeks dairying, two lectures, six hours practice per day. Address Prof. T. E. Woodward, Logan.

VERMONT. *University of Vermont and State Agricultural College.* College course, dairying, senior year, four months, five hours per week, two-thirds lectures, one-third practice; short dairy course, eight weeks; experimental work. Address Prof. R. M. Washburn, Burlington.

VIRGINIA. *Virginia Agricultural and Mechanical College and Polytechnic Institute.* College course, home dairying, six weeks, nine hours per week, lectures and demonstrations. Creamery butter making, six weeks, nine hours per week, lectures and demonstrations. Cheese making, four weeks, nine hours per week, lectures and demonstrations. Dairy bacteriology, six weeks, nine hours per week, lectures and demonstrations. Apprentice course, home dairying, twelve weeks, twelve hours per week, lectures and demonstrations. Farmers' short course, in connection with general short course, one week, twenty-four hours, lectures and demonstrations. Address Prof. W. K. Brainerd, Blacksburg.

Hampton Normal and Agricultural Institute. (Colored.) Regular agricultural course, dairying, six months practice, five hours daily in stables for four months, five hours daily in creamery for two months, sixty forty-minute lectures. Special six weeks' short course, one hour daily in lectures, five hours practice in stables and creamery. Fifteen forty-minute lectures, also fifteen periods of creamery practice for all girls and boys taking academic courses. Address Prof. C. K. Graham, Director, Agricultural Department, Hampton.

WASHINGTON. *State College of Washington.* Short course in agriculture, ten weeks beginning with January. Courses offered in farm dairying, milk testing, butter and cheese making, and general dairy practice. School of Elementary Science, farm dairying, nineteen weeks, two hours per week. College course, nine courses offered covering all phases of dairying, lectures, and laboratory work extending throughout the college year. Address State College, Pullman.

WEST VIRGINIA. *College of Agriculture of West Virginia University.* College course, dairying, six courses of twelve to fourteen weeks each, one-third lectures, two-thirds practice. Two courses in advanced dairy work. Short course for farmers, winter, four weeks. Dairy extension work in dairy schools of one week each, in various counties. Address Charles A. Lueder, Instructor in Dairying, College of Agriculture, West Virginia University, Morgantown.

WISCONSIN. *College of Agriculture of the University of Wisconsin.* Dairy department: 1. Winter course, beginning with November, twelve weeks. 2. Swiss cheese course, two weeks in February. 3. Special dairy course for creamery and cheese factory operators and managers, ten days in February. 4. Summer course, March to November (any ten weeks). 5. Farm dairy course, December to March, fourteen weeks. 6. Long course, September to June each year. 7. Farmers' course, two weeks. College course required freshman year; elective during sophomore, junior, and senior years, half the time theory and half the time laboratory, covering all phases of dairying. Dairy extension work in butter and cheese scoring exhibits. Address Prof. E. H. Farrington, Madison.

Winnebago County School of Agriculture and Domestic Economy. Short winter course in dairying and one of the regular studies in the first year. Time is about equally divided between theory and practice. Address D. O. Thompson, Principal, Winneconne, Wis.

Dunn County School of Agriculture and Domestic Economy. Regular course, practical dairying and creamery management, two years, sixteen weeks each

year. This will be practical work supplemented with the necessary lectures. It is a course designed to train young men in conducting the business of dairy farming. Dairy extension work in farmers' institutes. Address Prof. F. R. Crane, Menomonie, Wis.

La Crosse County School of Agriculture and Domestic Economy, Onalaska. Dairying is one of the regular studies in the first year of a two-year course. Instruction is given in laboratory and text-book work, covering a study of milk and its composition, care of utensils, testing of dairy products, operation of dairy machinery, making of butter and cheese, marketing, and a study of bacteria with reference to its effect upon the dairy industry.

Marathon County School of Agriculture and Domestic Economy, Wausau. In the first year six weeks are devoted to the study of dairy cattle, six weeks to dairying, milk, and milk testing, and in the second year ten weeks are devoted to dairying, and milk and its products.

WYOMING. *College of Agriculture and Mechanic Arts of the University of Wyoming.* Dairying is offered in the regular four years' course. Milk and its properties, changes in dairy products due to bacteria, butter and cheese making, judging butter and cheese, dairy tests, dairy machinery. Text books. Twice a week. Elective, first semester, junior year. No short course is offered. No dairy extension work. Address Prof. A. D. Faville, Laramie.

MEDICAL MILK COMMISSIONS IN THE UNITED STATES AND CANADA.

The American Association of Medical Milk Commissions. Organized 1907. President, Dr. Milton J. Rosenau, Cambridge, Mass. Secretary, Dr. Otto P. Geier, 124 Garfield place, Cincinnati, Ohio. Treasurer, Dr. A. W. Meyers, Milwaukee, Wis.

[Arranged according to year of organization.]

Medical Milk Commission of Essex County, New Jersey. Organized 1893. Chairman, Dr. Henry L. Coit, Newark. Secretary, Dr. Floy McEwen, 299 Belleville avenue, Newark.

New York Medical Milk Commission. Organized 1896. Chairman, Dr. L. Emmett Holt, College of Physicians and Surgeons, New York City. Secretary, Dr. John H. Huddleston, 145 West Seventy-eighth street, New York City.

Milk Commission of the Philadelphia Pediatric Society. Organized 1899. Chairman, Dr. J. P. Crozer Griffith. Secretary, Dr. Samuel McC. Hamill, 1822 Spruce street, Philadelphia, Pa.

Milk Commission of the Medical Society of the County of New York. Organized 1900. Chairman, Dr. E. K. Dunham. Secretary, Dr. Rowland G. Freeman, 211 West Fifty-seventh street, New York City.

Milk Commission of Medical Society of the County of Kings, Brooklyn, N. Y. Organized 1901. Chairman, Dr. W. A. Northridge. Secretary and Treasurer, Dr. Walter D. Ludlum, 362 Marlboro road.

Milk Commission of the Hartford County Medical Society, Hartford, Conn. Organized 1902. Chairman, Dr. Walter G. Murphy. Secretary, Dr. R. S. Starr, 75 Pratt street.

Milk Commission of the Elmira Academy of Medicine, Elmira, N. Y. Organized 1902. Chairman, Dr. C. W. M. Brown. Secretary, Dr. Rose G. Loop, 54 South Main street.

Milk Commission of the Medical Society of the County of Albany, Albany, N. Y. Organized 1902. Chairman, Dr. James P. Boyd. Secretary, Dr. Henry L. K. Shaw, 198 Washington avenue.

- Milk Commission of Hennepin County Medical Society, Minneapolis, Minn.* Organized 1902.^a Chairman, Dr. J. P. Sedgwick, 820 Donaldson Building.
- Milk Commission of the Milwaukee Medical Society, Milwaukee, Wis.* Organized 1903. Chairman, Dr. Lorenzo Boorse. Secretary, Dr. Albert W. Meyers, 141 Wisconsin street.
- St. Louis Pure Milk Commission, St. Louis, Mo.* Organized 1904. President, Dr. Albert Merrell. Secretary, Dr. A. S. Bleyer, 75 North Kings Highway.
- Milk Commission, City of Cleveland, Cleveland, Ohio.* Organized 1904. President, Samuel Mather. Secretary-treasurer, Dr. J. J. Thomas, 1110 Euclid avenue.
- Milk Commission of the San Francisco County Medical Society, San Francisco, Cal.* Organized 1905. President, Dr. Alfred B. Spaulding, 2510 Washington street. Secretary, Dr. Adelaide Brown, 2520 Sacramento street.
- Milk Commission of Sanitary Department, City of Seattle, Wash.* Organized 1905. Chairman, Dr. William G. Booth. Secretary, Dr. Philip Von Phul, Alaska Building, Seattle.
- Milk Commission of the Onondaga Medical Society, Syracuse, N. Y.* Organized 1905. Chairman, Dr. A. Clifford Mercer. Secretary, Dr. Albert S. Hotaling, 801 East Genesee street.
- Milk Commission of the Cincinnati Academy of Medicine, Cincinnati, Ohio.* Organized 1906. Chairman, Dr. Alfred Friedlander. Secretary, Dr. Otto P. Geier, 124 Garfield place.
- Milk Commission of the Suffolk District Medical Society, Boston, Mass.* Organized 1906. Chairman, Dr. John L. Morse. Secretary, Dr. Fritz B. Talbot, 171 Bay State road.
- Milk Commission of the Cambridge (Mass.) Medical Improvement Society, Cambridge.* Organized 1906. Chairman, Dr. William D. Swann. Secretary, Dr. Albert P. Norris, 760 Massachusetts avenue.
- Milk Commission of Jefferson County Medical Society, Louisville, Ky.* Organized 1906. Chairman, Dr. Cuthbert Thompson. Secretary, Dr. Ben Carlos Frazier, Atherton Building.
- Milk Commission of Medical Society of County of Monroe, Rochester, N. Y.* Organized 1906. Chairman, Dr. Richard M. Moore. Secretary, Dr. J. R. Williams, 290 Monroe avenue.
- Milk Commission of the Academy of Medicine, Toledo, Ohio.* Organized 1907. President, Dr. Charles G. Chapman. Secretary, Dr. Charles W. Moots, "The Nicholas."
- Milk Commission of Los Angeles County Medical Association, Los Angeles, Cal.* Organized 1907. President, Dr. Fitch C. E. Mattison. Secretary, Dr. George H. Kress, 240 Bradbury Building.
- Allegheny County Medical Milk Commission, Pittsburg, Pa.* Organized 1907. Chairman, Dr. Ogden M. Edwards, jr. Secretary, Dr. C. C. Wholey, 201 South Craig street.
- Kansas City Pure Milk Commission, Kansas City, Mo.* Organized 1907. Chairman, Dr. George C. Mosher, 605 Bryant Building. Secretary, Dr. Max Goldman, 309 Century Building.
- Milk Commission of Wayne County Medical Society, Detroit, Mich.* Organized 1907. Chairman, Dr. R. S. Rowland. Secretary, Dr. T. B. Cooley, Fine Arts Building.
- Milk Commission of Montgomery County Medical Society, Dayton, Ohio.* Organized 1907. President, Dr. C. W. King. Secretary, Dr. A. L. Light, 1000 U. B. Building.
- Milk Commission of Jackson County Medical Society, Jackson, Mich.* Organized 1907. Secretary, Dr. H. H. Enders, Jackson State Savings Bank Building.
- Milk Commission of Akron, Akron, Ohio.* Organized 1907. Chairman, Dr. E. A. Weeks, 512 Everett Building.

^aThis is the date of the "permanent commission," and continues the work of an earlier committee appointed for a similar purpose.

- Milk Commission of Chicago Medical Society, Chicago, Ill.* Organized 1908. President and chairman, Dr. C. S. Bacon, 2156 Sedgwick street. Secretary, Dr. J. W. Van Der Slice, 165 North Sixty-fourth avenue.
- Broome County Medical Milk Commission, Binghamton, N. Y.* Organized 1908. President, Le Roy D. Farnham, 42 Main street.
- Milk Commission of Galesburg, Ill.* Organized 1908. President, Dr. Benjamin D. Baird, Main street, Galesburg. Secretary, Dr. D. J. Evans, Galesburg.
- Certified Milk Commission of Bridgeport Medical Society, Bridgeport, Conn.* Organized 1908. Secretary, Dr. Charles N. Haskell, 467 State street.
- Milk Commission of Academy of Medicine of Columbus, Ohio.* Organized 1908. President, Dr. Ernst Scott. Secretary, Dr. George C. Schaeffer, 112 East Broad street.
- Canadian Medical Association Milk Commission, Toronto, Canada.* Organized 1908. Chairman, Dr. Charles J. Hastings, 258 Wellesley street.
- Milk Commission of the Greenwich Medical Society, Greenwich, Conn.* Organized 1908. Chairman, Dr. A. W. Klein. Secretary-treasurer, Dr. Edward O. Parker.
- Medical Milk Commission of Duval County Medical Society, Jacksonville, Fla.* Organized 1908. Chairman, Dr. James V. Freeman. Secretary, Dr. William Edson Ross, 602 Consolidated Building, Jacksonville.
- Milk Commission of Ocala, Ocala, Fla.* Organized 1908. Secretary, Dr. E. Van Hood.
- Milk Commission of Indianapolis Medical Society, Indianapolis, Ind.* Organized 1908. President, Dr. Charles E. Ferguson. Secretary, Dr. O. N. Torian, Willoughby Building.
- Milk Commission of Passaic County Medical Society, Paterson, N. J.* Organized 1908. President, Dr. Francis H. Todd. Secretary and treasurer, Dr. G. Edward Tuers, 12 Church street.
- Milk Commission of the Academy of Medicine, Toronto, Canada.* Organized 1908. President, Dr. Henry T. Machell. Secretary-treasurer, Dr. W. L. T. Addison, 431 Broadview avenue.
- Medical Milk Commission of Worcester, Mass.* Organized 1908. President, Dr. Charles L. Nichols. Secretary, Dr. R. J. Ward, 397 Pleasant street.
- Milk Commission of Summit County Medical Society, Akron, Ohio.* Organized 1908. President, Dr. A. F. Sippy. Secretary, Dr. E. M. Weaver, 500 Everett Building.
- Milk Commission of Kent County Medical Society, Grand Rapids, Mich.* Organized 1908. Chairman, Dr. G. McBride. Secretary, Dr. William H. Veenboer, 504 Ashton Building.
- Milk Commission of Silverbow County Medical Society, Butte, Mont.* Organized 1908. President, Dr. J. D. Freund. Secretary, Dr. C. T. Pigot, Penna Block.
- Santa Barbara Medical Milk Commission, Santa Barbara, Cal.* Organized 1908. President, Dr. William L. Holt. Secretary, Dr. Charles S. Stoddard, Fithian Building.
- Ocean County Medical Society Milk Commission, Lakewood, N. J.* Organized 1908. Chairman, Dr. William G. Schauffler. Secretary, Dr. Irwin H. Hance, Lakewood.
- Milk Commission of Warren County Medical Society, Warren, Pa.* Organized 1908. Secretary, Dr. L. E. Chapman.
- Milk Commission of Luzerne County Medical Society, Wilkes-Barre, Pa.* Organized 1908. President, Dr. Charles Long. Secretary, Dr. Maurice Ahlborn.
- Milk Commission of Northampton County Medical Society, Easton, Pa.* Organized 1908. Chairman, Sterling D. Shimer.
- Milk Commission of El Paso County Medical Society, Colorado Springs, Colo.* Organized 1909. President, Dr. C. F. Gardiner. Secretary, Dr. Lewis Hugh McKinnie.

Union County Medical Milk Commission, Elizabeth, N. J. Organized 1909. Chairman, Dr. William H. Murray, Plainfield. Secretary, Dr. Arthur Stern, 224 East Jersey street.

Franklin County Milk Commission, Saranac Lake, N. Y. Organized 1909. President, Dr. E. R. Baldwin. Secretary, Dr. D. C. Twichell.

Milk Commission of the Galva District Medical Society, Kewanee, Ill. Organized 1909. President, Dr. H. N. Heflin.

Wheeling Certified Milk Commission, Wheeling, W. Va. Organized 1909. President, Dr. Robert J. Reed. Secretary, Dr. William H. McClain, 83 Twelfth street.

Milk Commission of Malden Medical Society, Malden, Mass. Organized 1909. Chairman, Dr. A. J. Stevens, 539 Main street. Secretary, Dr. E. W. Barron.

Milk Commission of the Alameda County Medical Society,^a Oakland,² Cal. Reorganized 1909. President, Dr. Thomas C. McCleave, 2200 Bancroft way, Berkeley. Secretary, Dr. Sarah I. Shuey, 952 Fourteenth street, Oakland.

ASSOCIATIONS OF BREEDERS OF PUREBRED DAIRY ANIMALS.

The interests of the different breeds of dairy cattle are in charge of organizations of breeders, which determine purity of breeding, verify pedigrees, register eligible animals, and publish herdbooks. Some of them record and publish sales and transfers and attested records of dairy performances. They also establish standards of excellence. The details of the work are usually left to the secretary. The names of the various associations and the addresses of the secretaries are as follows:

Ayrshire Breeders' Association. Secretary, C. M. Winslow, Brandon, Vt.

Brown Swiss Breeders' Association. Secretary, C. D. Nixon, Owego, N. Y.

Dutch Belted Cattle Association of America. Secretary, G. G. Gibbs, Marksboro, N. J.

American Guernsey Cattle Club. Secretary, William H. Caldwell, Peterboro, N. H.

Holstein-Friesian Association of America. Secretary, F. L. Houghton, Brattleboro, Vt.

American Jersey Cattle Club. Secretary, J. J. Hemingway, 8 West Seventeenth street, New York, N. Y.

In addition to the strictly dairy cattle named above, some breeds, primarily developed for beef production, are occasionally bred and used as dairy cattle. Their associations are as follows:

American Devon Cattle Club. Secretary, L. P. Sisson, Newark, Ohio.

American Polled Durham Breeders' Association. Secretary, J. H. Marts, Greenville, Ohio.

Red Polled Cattle Club of America. Secretary, H. A. Martin, Gotham, Wis.

American Shorthorn Breeders' Association. Secretary, John W. Groves, 17 Exchange avenue, Union Stock Yards, Chicago, Ill.

The following breeds are of practical dairy value, although not yet officially certified as purebred:

The American Polled Jersey Cattle Club. Secretary, Charles S. Hatfield, R. F. D. 4, Springfield, Ohio.

American Milk Goat Record Association. Secretary, J. C. Darst, Dayton, Ohio.

Approved:

JAMES WILSON,

Secretary of Agriculture.

WASHINGTON, D. C., June 25, 1910.

^a Oakland Home Club Milk Commission, Oakland, Cal. Organized 1904.